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WHAT IS CLAIMED IS:

1,	1. A system for reordering data packets in a packet switch network, wherein
2	a plurality of source processors transmit the data packets to a destination processor via
3	multiple communication fabrics, and wherein the source processors and the destination
4	processor are synchronized, the system comprising:
_ 5	time stamp logic at each source processor that operates to include a time stamp
6	parameter with each of the data packets transmitted from the source processors;
7	a plurality of memory queues located at the destination processor;
8	an Enqueue processor coupled to the plurality of memory queues and located at
9	the destination processor, wherein the Enqueue processor operates to store a memory
10	pointer and an associated time stamp parameter for each of the data packets received at
11	the destination processor in a selected memory queue; and
12	a Dequeue processor coupled to the plurality of memory queues and operable to
13	access the plurality of memory queues to determine a selected memory pointer associated
14	with a selected time stamp parameter, and wherein the Dequeue processor operates to
15	process the selected memory pointer to access a selected data packet for output in a
16	reordered packet stream

- 1 2. The system of claim 1, wherein the source processors and the destination 2 processor are synchronized to an external synchronization signal.
 - 3. The system of claim 1, wherein the plurality of memory queues are associated with the multiple communication fabrics, wherein there is at least one memory queue per communication fabric.
 - 4. The system of claim 1, wherein the Enqueue processor is operable to store each of the data packets received at the destination processor in a memory at a location defined by the memory pointer.
- 5. The system of claim 1, wherein each of the plurality of memory queues is a first-in-first-out memory that includes a queue output, and wherein the Dequeue processor accesses the queue outputs to determine the selected memory pointer

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- 4 associated with the selected time stamp parameter.
- 1 6. The system of claim 5, wherein the selected time stamp parameter is the earliest time stamp parameter at the queue outputs.
- 7. The system of claim 1, wherein the Dequeue processor waits a selected delay period defined by the difference between the current time and the selected time stamp parameter before accessing the selected received data packet.
 - 8. The system of claim 1, wherein the source processors add a priority level indicator to each of the transmitted data packets, wherein the priority level indicator is chosen from selected priority levels.
 - 9. The system of claim 8, wherein the plurality of memory queues are associated with the multiple communication fabrics and the selected priority levels, and wherein the total number of the memory queues is equal to the number of communication fabrics times the number of selected priority levels.
 - 10. The system of claim 9, wherein the Dequeue processor is operable to determine the earliest time stamp parameter at the queue outputs associated with the highest priority level.
- 1 11. A method for reordering data packets in a packet switch network, wherein a plurality of source processors transmit the data packets to a destination processor via multiple communication fabrics, and wherein the source processors and the destination processor are synchronized, the method comprising steps of:
 - including a time stamp parameter with each of the data packets before they are transmitted from the source processors;
- defining a plurality of memory queues located at the destination processor;

 storing a memory pointer and a time stamp parameter associated with each of the

 data packets received at the destination processor in a selected one of the memory

 queues; and
 - determining, from the plurality of memory queues, a selected memory pointer associated with a selected time stamp parameter; and

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- processing the selected memory pointer to access a selected data packet for output in a reordered packet stream.
- 1 12. The method of claim 11, further comprising a step of waiting for a 2 selected time period determined by a difference between a current time and the selected 3 time stamp parameter before performing the step of processing.
- 1 13. The method of claim 11, further comprising a step of including a priority value with each of the data packets before they are transmitted by the source processors.
- 1 14. The method of claim 13, wherein the step of determining is a step of determining, from a portion of the plurality of memory queues, the selected memory pointer associated with the selected time stamp parameter, wherein the portion of the plurality of memory queues is associated with a selected priority value.
 - 15. The method of claim 11, wherein the step of defining comprises a step of defining the plurality of memory queues so that there are as many memory queues as there are network fabrics.
 - 16. The method of claim 11, wherein the step of including further comprises a step of including a priority level indicator with each of the data packets before they are transmitted from the source processors, wherein the priority level indicator is chosen from selected priority levels.
- 1 17. The method of claim 16, wherein the step of defining comprises a step of defining the plurality of memory queues so that the total number of memory queues is equal to the number of communication fabrics times the number of selected priority levels.
 - 18. The method of claim 11, wherein the step of determining is a step of determining, from the plurality of memory queues, a selected memory pointer associated with a selected time stamp parameter, wherein the selected time stamp parameter is the earliest time stamp parameter.

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